

Remarks/Arguments

This Amendment is filed to create a Request for Continuation Patent Application (RCE) in response to the Office Action dated November 2, 2005. In that action the Examiner, in making it a Final Action, rejected all pending claims in the application under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 4,158,449 to Sun et al.

Applicant has carefully studied the Examiner's Action and comments, has again carefully reviewed the single cited and applied prior art reference, has additionally reviewed the specification, claims, abstract and drawings in this case, and in the present RCE-creating amendment introduces certain modest changes to the texts of claims 1 and 11, which, upon entry of this Amendment, further clarify the distinguishing features of applicant's invention, and position all claims in this case for a determination of patentability, and therefore for allowance.

With all due respect to the Examiner's presentation of the Sun et al. reference as an allegedly anticipating reference, applicant thoroughly disagree with the Examiner's positions regarding this reference, and point out herein below why the Sun et al. reference not only is not an anticipating reference, but also is, in fact, a reference which has no relevance whatsoever to applicant's claimed invention.

As the Examiner must certainly understand from his experience in the realm of patenting, one of the significantly important aspects of invention involves *discovery and identification* of a "problem to be solved". The present application provides a vivid example of the importance of such a discovery – one relating to a very baffling, and indeed life-threatening, problem experienced in certain aircraft with respect to catastrophic failure of the aircraft's

electrical generator (or generators) resulting from a heretofore mystifying wear problem in the structural region of the electrical contact sliding zone in a generator. As explained in the instant case specification, this elusive problem is one wherein a kind of “reverse” and very startling wear activity takes place in such a zone. This wear activity involves the abrasive degrading of the electrical contact (commutator, etc.) surfaces which are engaged by brushes and the like, whereas the normal expectable pattern of wear in that region is one wherein *the brushes become worn* to a condition of non-functionality.

Pages 1-3, inclusive, in the specification clearly elaborate this *discovery* which underpins the present invention, and points out how applicant made the discovery which has lead to his claimed invention.

As is clearly presented in the specification, applicant’s approach is one wherein an air stream, basically at atmospheric pressure, is *tightly coupled* to the electrical contact sliding zone in an aircraft’s generator to form, essentially, the sole source of air flowing into that zone. Air provided for flowing into this zone, in accordance with the invention, begins with an air intake exposed on the outside of an aircraft, *downstream* from where an engine exhaust exists, with this intake and air stream passing through an appropriate filter to remove contaminants typically contained in aircraft engine exhaust. In all of the art known to applicant, including that which has been cited and applied by the Examiner to project applicant’s claims, there is a complete absence of any recognition that the wear problem solved by applicant’s invention exists and is understood. It is only applicant who has made this discovery, and who has designed an approach for dealing with the very serious problems which can otherwise occur in the sliding contact zone of an

aircraft's electrical generator. Without such a problem recognition (discovery), the present invention would not exist, and it is therefore not at all surprising that there is no prior art which expresses this recognition.

The Sun et al. reference is completely inapplicable and irrelevant with respect to applicant's invention for the reason that it is focused on certain air flow regions into and within an aircraft's main engine *per se* -- in the case of the cited reference, a gas turbine engine. The Sun et al., patent makes absolutely no reference to an electrical sliding contact zone, and nothing about airflow streams which are created and discussed in relation to the Sun et al. system have anything to do with respect to guiding air to a filtered and tightly coupled connection with a aircraft-generator sliding contact zone.

The Examiner points to component 9 in the Sun et al. reference as being a source of bleed air, but fails to recognize that this source of bleed air is a high-pressure compressed air flow which can be furnished to an auxiliary power unit (APU) "*to drive that unit*". If the Examiner will carefully reread the content of the Sun et al reference, he will find that references therein to an auxiliary power unit in relation to bleed air flow from component 9 are references to the power-driving of an auxiliary power unit. With respect to this statement about the Sun et al. reference, the Examiner is encouraged to look again at column 1, lines 31-33, inclusive, and column 5, lines 30-33, inclusive.

The Examiner's position that air flow from the bleed air conduit 9 in the Sun et al. reference somehow flows in a tightly coupled fashion to an aircraft generator's electrical sliding contact zone is an extraordinary leap. Nothing at all describes the physical manner in which bleed

air is *actually distributed* to an auxiliary power unit, but for the very clear references made by Sun et al. that this bleed air flow, which is a compressed air flow, may be used for driving the operation of an auxiliary power unit.

By the present Amendment, certain modest changes have been made in currently amended claims 1 and 11 to strengthen the clarity in these claims regarding the makeup of applicant's invention. Claim 2-5, inclusive, are retained as original claims, and claims 6-10, inclusive, are identified as withdrawn claims.

For the reasons given above, all claims presented in this application are believed to be significantly distinguishable from anything shown or suggested by the single cited and applied prior art Sun et al. reference. Accordingly, favorable reconsideration of this RCE application, and early allowance now of all claims presented therein, are respectfully solicited. If the Examiner has any questions regarding the amendment or remarks, the Examiner is invited to contact Attorney-of-Record Jon M. Dickinson, Esq., at 503-504-2271.

The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any over-payment to Account No. 22-0258.

Customer Number

56703

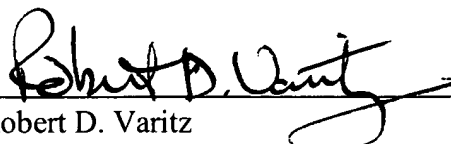
Respectfully Submitted,

ROBERT D. VARITZ, P.C.

Registration No: 31436

Telephone: 503-720-1983

Facsimile: 503-233-7730


Robert D. Varitz
4915 S.E. 33d Place
Portland, Oregon 97202



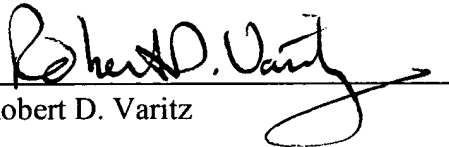
CERTIFICATE OF EXPRESS MAILING

"Express Mail" Mailing Label No.
Date of Deposit - December 5, 2005

EV713893765US

I hereby certify that the attached PRELIMINARY AMENDMENT IN SUPPORT OF RCE UNDER 37 C.F.R. § 1.114 and a PTO-2038 credit card authorization form in the amount of \$ 395.00 are being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 C.F.R. 1.10 on the date indicated above and is addressed to:

MS RCE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450


Robert D. Varitz